IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of Bar-Gadda, Ronny For Method for Generating Hydrogen from Water or Steam in a Plasma	Serial No. 10/632,708 Confirmation No. 3621 Filed August 01, 2003 Group Art Unit 2834 Examiner: (unassigned)

Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

Petition to Make Special

Applicant respectfully requests that advancement of examination be granted with respect to the above-identified application pursuant to 37 C.F.R. §1.102 and in accordance with the procedure set forth in MPEP 708.02 VI – ENERGY. The above identified application discloses an invention, as set forth in each of its the claims, that materially contributes to the discovery or development of energy resources. More particularly, the application is directed to the development of hydrogen fuel technologies.

This petition is accompanied by the requisite fee of $130.00 under 37 C.F.R. §1.17(h).

On January 28, 2003, George W. Bush, President of the United States of America, delivered the constitutionally mandated State of the Union[1] address to Congress. In this address, the President set forth a goal to promote energy independence for the country while dramatically improving the environment. Mr. Bush asserted in the address that "[I]n this century, the greatest environmental progress will come about ... through technology and innovation" and implored Congress to "protect our environment in ways that generations before us could not have imagined."

[1] The full text of the State of the Union address is available at http://www.whitehouse.gov/news/releases/2003/01/20030128-19.html.

In the same address, the President offered a proposal to Congress to authorize $1.2 billion in research funding top place the United States at the forefront of developing hydrogen powered automobiles in which hydrogen is reacted to oxygen to generate the energy to power the automobile, producing only water as a by product and not exhaust fumes. Mr. Bush recognized this innovation would "make our air significantly cleaner, and our country much less dependent on foreign sources of energy."

After the President's address to Congress, it was reported[2] that most of the major automobile companies doing business in the United States already have operational hydrogen powered fuel cell vehicle prototypes being road tested. In the cited report, these companies express optimism that hydrogen powered fuel cell vehicles could be available to consumers within a decade, a timetable even more aggressive than the one proposed by the President. However, this optimism is tempered by a cautionary note that "a hydrogen distribution system has not yet even begun to be developed."

Furthermore, the President's goal of developing hydrogen powered automobiles was met by others with stinging criticism. To quote one such criticism, "[W]hat Bush didn't reveal in his nationwide address, however, is that his administration has been working quietly to ensure that the system used to produce hydrogen will be as fossil fuel-dependent -- and potentially as dirty -- as the one that fuels today's SUVs. According to the administration's National Hydrogen Energy Roadmap, drafted last year in concert with the energy industry, up to 90 percent of all hydrogen will be refined from oil, natural gas, and other fossil fuels -- in a process using energy generated by burning oil, coal, and natural gas. The remaining 10 percent will be cracked from water using nuclear energy."[3]

[2] "Bush Hydrogen Initiative Fuels Debate," http://www.cnn.com/2003/ALLPOLITICS/02/07/hydrogen.vision.ap/, Friday, February 7, 2003.
[3] "Bush's Hydrogen Fuel Comes From Oil...," Barry C. Lynn, Mother Jones, March 6, 2003, published by Rogue Independent Media Center, http://rogueimc.org/2003/06/808.shmtl.

The article, from which the quote set forth immediately above has been obtained, states that the administration's proposal to obtain hydrogen from fossil fuels would effectively eliminate the benefits offered by using hydrogen as a fuel for automobiles since the process of producing hydrogen from fossil fuels still would result in the release of carbon dioxide, the primary cause of global warming, into the atmosphere and continue this country's dependence on fossil fuels, most of which comes from imported oil. In this article criticism is also directed to the major oil companies seeking to protect their dominance in energy resources through lobbying efforts to affect administration policy and congressional legislation and through acquisitions of small research oriented companies seeking to produce hydrogen from renewable energy sources. Should the oil companies be successful in protecting their dominance, the article infers that even with a hydrogen economy, the country will remain dependent of foreign sources of oil for generations to come.

Applicant's invention, as set forth in the above-identified application, meets the President's goal by furthering environmental progress through technology and innovation and also protects our environment in a novel way that generations before us could not have imagined. Indeed, in a prior art search conducted by Applicant, no prior art was found disclosing or suggesting Applicant's claimed processes for producing hydrogen from molecular water. The results of this prior art search are disclosed in the accompanying Information Disclosure Statement filed concurrently herewith.

Applicant's invention addresses the above stated concern of the automobile industry relating to the lack of a hydrogen fuel infrastructure in that Applicant's claimed processes are scalable allowing for the efficient production of hydrogen on a small local scale, such as in the home or vehicle, while large installations could produce quantities suitable for commercial distribution. Whereas current fossil fuel technologies rely upon an extensive global infrastructure from extracting the raw fuel, whether coal, oil or natural gas, from the ground, through refining, transporting and storing of the raw fuel, intermediaries and by-products up to the ultimate delivery of the final fuel product to consumers, the methods of the present invention

do not rely on the construction of such far flung infrastructure but may be practiced at the point of use of the produced hydrogen.

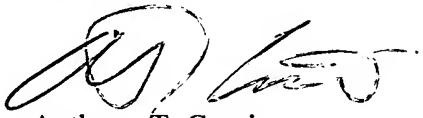
The processes of Applicant's invention also obviate the above mentioned criticisms from the cited article since Applicant's invention does not rely on fossil fuels as the source of hydrogen, and may further rely on renewable energy sources and wasted energy of conventional energy production as the source of energy to extract the hydrogen from molecular water. Although the article does infer that water is a preferred source for hydrogen, the known technologies for breaking water molecules into its constituents of hydrogen and oxygen in commercially usable quantities are extremely energy intensive. The article cites the preferred source for such energy as nuclear power plants, which are also unacceptable due to the ecological impacts such plants are known to cause. Accordingly, it is seen that the prior art, even with all the criticisms targeted at such art, envisions fossil fuels, being rich in carbon and hydrogen, as the primary source of hydrogen production in the foreseeable future without regard to the necessity of removing such carbon in the form of carbon dioxide, contributing to global warming, and the rapidly depleting sources of such fossil fuels themselves. Therefore, with the known prior art, the President's stated goal of energy independence and an improved environment are not met. In fact, adopting the apparatus and processes of the known prior art would continue the country's dependence imported oil and rapidly depleting reserves of oil and cause further environmental degradation.

It is mentioned above that hydrogen can be extracted from molecular water using nuclear energy. To produce commercially usable quantities of hydrogen, the article assumes an electrolysis process is used wherein an electric current between an cathode and an anode immersed in water ionizes the water molecules such that the hydrogen and oxygen ions respectively migrate to the anode and cathode. Electrolysis is highly inefficient and to be able to extract commercial quantities of hydrogen from water dedicated power plants, whether nuclear or fossil fuel based, would be required to produce the requisite input energy for the electrolysis process.

It is taught, through Applicant's disclosure in the above-identified application, that hydrogen can be extracted from water, the preferred source of hydrogen, using a novel process that is highly efficient and not as energy intensive as electrolysis. In fact Applicant's disclosure envisions renewable and recyclable resources as the source of energy to produce hydrogen for molecular water thereby ultimately removing dependency from fossil fuels altogether.

Applicant's invention is directed to a hydrogen fuel technology within the meaning of MPEP 708.02 VI – ENERGY. Widespread adoption of Applicant's claimed processes would meet the goal stated by the President in the State of the Union address to achieve energy independence and environmental progress through technology and innovation that protects our environment in ways that generations before us could not have imagined. For these and the other reasons as set forth above, Applicant respectfully submits that this Petition should be granted and expedited examination be given to the claimed processes of the above identified application.

Respectfully submitted,



Date: March 26, 2004

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